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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		10/025,357	CAHILL ET AL.
		Examiner	Art Unit
		Dennis Rosario	2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>RCE9/02/2005</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>2-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>19 December 2001 and 06 January 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment was received on September 2, 2005. Claims 2-28 are pending.

Claim Rejections - 35 USC § 112

2.   Due to the amendment, the rejection of claim 27 is withdrawn.

Response to Arguments

3. .   Applicant's arguments in an after final amendment filed 7/15/2005 with respect to claim 5 have been fully considered but they are not persuasive for the same reasons in paragraph 7 in the advisory action of 8/12/2005;thus, the rejection of claim 5 is maintained.

4.   Applicant's arguments, see RCE amendment, filed 9/2/2005, with respect to the rejection(s) of claim(s) 3,4,6-28 under 102(b) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Burt et al. (US Patent 5,649,032 A) and Takiguchi et al. (US Patent 6,549,681 B1).

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

6.   Claims 3-12,26 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated

by Takiguchi et al. (US Patent 6,549,681 B1).

Regarding claim 5, Takiguchi et al. discloses a method for producing a cropped

digital image, comprising the steps of:

a)   providing a plurality of partially overlapping source digital images (fig. 64a,

numerals 61 and 62);

b)   providing a cropping aspect ratio L:H (fig. 67, labels p1-p4), the cropping

aspect ratio being the ratio of the length (p1 and p2) to the height (p1 and p4) of the

cropped digital image;

c)   providing a cropping criterion (fig. 67, label: CONDITION), the cropping

criterion being a criterion for the size and location (Fig. 67, label: CONDITION has a

plurality of associated formulas that inherently describe size and location.) of the

cropped digital image;

d)   combining the source digital images to form a composite digital image
(Fig. 62);

e)   automatically selecting (or "automatically extract-ing" in col. 5, lines
57,58) the cropping region ("rectangular area" in col. 5, line 59) of the composite digital
image according the cropping criterion, said cropping region being a rectangular region
having aspect ratio L:H (Fig. 67, labels: the length of p1 and p2: and the length of p1
and p4), and having size and location determined by the cropping criterion; and

f)   cropping the composite digital image to the cropping region to form a
cropped digital image (Fig. 64D);

g)   wherein the cropping criterion specifies that the cropped digital image is
the composite digital image region that is largest in area (Fig. 64A-64C clearly shows
the claimed "largest in area.") of the set of all composite digital image regions having
aspect ratio L:H (determined according to the formulas of fig. 67) that are centered
(Figures 64A-64C clearly show the claimed "centered.") at the centroid ("middle point" in
col. 41, line 55) of the main subject ("rectangular area" in col. 41, line 53) of the
composite digital image.

Claims 3 including limitation "a)", 4 and 28 are rejected the same as claim 5.
Thus, argument similar to that presented above for claim 5 is equally applicable to
claims 3, "a)",4 and 28.

Regarding claim 2, Takiguchi et al. discloses the method claimed in claim 3, wherein the step of providing source digital images further comprises:

a)   the step of digitizing source photographic images (fig. 55, num. 7 is an "electronic camera" in col. 41, lines 45,46 that inherently captures electronic or digital images.) to form source digital images.

Regarding claim 6, Takiguchi et al. discloses the method claimed in claim 3, further comprising the step of:

g)   resizing the cropped digital image for display (Fig. 69, num. 101 is a resized image as compared to image 106 of fig. 69.).

Regarding claim 7, Takiguchi et al. discloses method claimed in claim 3 , further comprising the step of:

g)   resizing the cropped digital image (as mentioned in claim 6) for hardcopy output (Fig. 40, step S3601. Note that Takiguchi et al. states that the "present invention is not limited to the specific embodiments described in the specification" in col. 63, lines 53,54. Thus the printer of fig. 40 of one embodiment can be used with the embodiment of fig. 55.).

Regarding claim 8, Takiguchi et al. discloses the method claimed in claim 3, further comprising the step of:

g)   transforming the pixel values (Fig. 55, num. 18) of the cropped digital image to an output device compatible color space (Fig. 2 is a display with a certain size or space.).

Regarding claim 9, Takiguchi et al. discloses the method in claim 3, wherein the source digital images have pixel values that are linearly or logarithmically related to scene intensity (Fig. 24,label "a1" shows a "smooth continuation of the image lines "col. 2, lines 8,9).

Claim 10 is rejected the same as claim 9. Thus, argument similar to that presented above for claim 9 is equally applicable to claim 10 except for the additional limitation of a metric transform or "histogram" in col. 12, line 44 and shown in fig. 24.

Regarding claim 11, Takiguchi et al. discloses the method of claim 9, wherein the step of providing source digital images further comprises:

a)   applying linear exposure transform(s) (or "coor-dinate transformation" in col. 40, lines 16,17.) to one or more of the source digital images to produce source digital images having pixel values that closely match (The above mentioned coordinate transformation is used for "matching" in col. 40, line 4 as shown in fig. 62.) in an overlapping region.

Claim 12 is rejected the same as claim 11. Thus, argument similar to that presented above for claim 11 is equally applicable to claim 12 except for the limitation of exposure falloff or "shift" in col. 1, line 65 or "shifting" in col. 39, line 66 in terms of a "lens" in col. 1, line 64 during recording.

Regarding claim 26, Takiguchi et al. discloses a system for producing a cropped digital image, comprising:

a)   a plurality of partially overlapping source digital images (fig. 64a, numerals 61 and 62);

b)   means for specifying (Fig. 66 includes a table column labeled: EXTRATION AREA as a means for specifying.) a cropping aspect ratio L:H (fig. 67, labels p1-p4), the cropping aspect ratio being the ratio of the length (p1 and p2) to the height (p1 and p4) of the cropped digital image;

c)   means for specifying (Fig. 66 includes a table column labeled: CONDITION as a means for specifying.) a cropping criterion (fig. 67, label: CONDITION), the cropping criterion being a criterion for the size and location (Fig. 67, label: CONDITION has a plurality of associated formulas that inherently describe size and location.) of the cropped digital image;

d)   means for combining the source digital images (Fig. 59 is a means for combining or "MATCHING" in fig. 59 ,step S11.) to form a composite digital image (Fig. 62);

e)   means for automatically (Fig.55, num. 28 is an "automatic" in col. 41, lines 51-53 process.) selecting (or "automatically extract-ing" in col. 5, lines 57,58) the cropping region ("rectangular area" in col. 5, line 59) of the composite digital image according the cropping criterion, said cropping region being a rectangular region having aspect ratio L:H (Fig. 67, labels: the length of p1 and p2: and the length of p1 and p4), and having size and location determined by the cropping criterion; and

f)   means for cropping (Fig. 68, step S52 is a means for cropping or

extracting.) the composite digital image to the cropping region to form a cropped digital

image (Fig. 64D);

g)   wherein the cropping criterion specifies that the cropped digital image is

the composite digital image region that is largest in area (Fig. 64A-64C clearly shows

the claimed "largest in area.") of:

g1)   the set of all composite digital image regions (fig. 67 shows two

image regions labeled A for one image and C for the other image.) having aspect

ratio L:H (p1-p4 determined according to the formulas of fig. 67).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 3,13,14,16 and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Burt et al. (US Patent 5,649,032 A) in view of Takiguchi et al. (US

Patent 6,549,681 B1).

Regarding claim 3, Burt et al. discloses a method for producing a cropped digital

image, comprising the steps of:

a)   providing (Fig. 3, label "INPUT IMAGE".) a plurality of partially overlapping

source digital images (Fig. 2A shows a plurality of partially overlapping images which

are used to generate a mosaic image.);

b)   providing a cropping aspect ratio L:H (Fig. ,num. 302 provides a

"cropping...size" in col. 6, line 15), the cropping aspect ratio being the ratio of the length

to the height of the cropped digital image;

c)   providing a cropping criterion ("parameters" in col. 11, line 3 are used as

criteria for "cropping functions" in col. 2, line 32 or a "cropping function" in col.11, line

3.), the cropping criterion being a criterion for the size and location of the cropped digital

image (or "region of interest" in col. 11, line 3 inherently has a size and location.);

d)   combining (Fig. 3,num. 304:COMBINATION PROCESS) the

source digital images (Fig. 2A shows a plurality of partially overlapping images for

combining.) to form a composite digital image (Fig. 2A shows a plurality of partially

overlapping images which are used to generate a mosaic image.);

e)   automatically selecting (Fig. 3,num. 302: SELECTION PROCESS is a

means for an "automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55.

Where the "selection functions may include cropping" in col. 10, line 53. Thus, fig.

3,num. 302 automatically selects cropping as indicated in fig. 5,num. 504: CROPPING.)

the cropping region (Fig. 3,num. 302: SELECTION PROCESS is a means for an

"automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55 that corresponds

to a cropping function that crops a region or "[image] portion[ ]" in col. 2, line 33.) of the

composite digital image (Fig. 3,num. 302: SELECTION PROCESS is a means for an

"automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55 that corresponds

to a cropping function that crops a region or "[image] portion[ ]" in col. 2, line 33 of the

composite digital image or mosaic image of figure 2A.) according to

e1)   the cropping criterion (Fig. 3,num. 302: SELECTION PROCESS is a

means for an "automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55 that

corresponds to a cropping function which crops a region or "[image] portion[ ]" in col. 2,

line 33 of the composite digital image or mosaic image of figure 2A according to the

cropping criterion of fig. 5, step 502:SELECT SELECTION FUNCTION AND

PARAMETERS which uses "parameters to control the cropping function" in col. 11, lines

2-4.),

e11)   said cropping region (or "[image] portion[ ]" in col. 2, line 33.) being

e111) a rectangular region (or a shape as mentioned in fig. 5,num.

506. Note that the shape of fig. 5,num. 506 corresponds to "cropping functions" in col. 2,

line 32 and "cropping function" in col. 11, line 3 and image portion of col. 2, line 33 since

an image portion does have a shape.) having said aspect ratio L:H ("cropping...size" in

col. 6, line 15.), and

e112) having size ("cropping...size" in col. 6, line 15.) and location

("select[ed]...portion" in col. 2, lines 32,33 includes "cropping functions" in col. 2, line 32

that corresponds to a region of interest of fig. 5,num. 506.) determined by the cropping

criterion ("parameters to control the cropping function" in col. 11, lines 2-4.); and

f)   cropping (Fig. 5, step 518:APPLY SELECTION FUNCTION

crops the image based on step 506 of fig. 5.) the composite digital image (mosaic image

of figure 2A.) to the cropping region to form a cropped digital image (at the output of

step 518: APPLY SELECTION FUNCTION.);

Burt et al. does not disclose the remaining limitations of claim 3, but does teach "cropping functions" in col. 2, line 32 that "limit the size of [a] mosaic" in col. 6, line 15 as shown in figures 2A-2C and fig. 7,num. 706. However, Burt e al. is deficient in a teaching that can limit the size of a mosaic. However, given the above mentioned figures, Burt et al. suggests to one of ordinary skill in the art that a mosaic image can be cropped in a plurality of ways especially in the horizontal direction to limit the size of a mosaic.

Takiguchi et al. teaches cropping and limiting the size of a mosaic as shown in figures 6A-64C, 65,67,fig. 69,num. 107.

g)   wherein the cropping criterion specifies that the cropped digital image (fig. 69,num. 107) is the composite digital image region (fig. 69,num. 107) that is largest in area of:

g1)   the set of all the composite digital image regions (fig. 67, num. 71 and another rotated image region labeled "C".) having said aspect ratio (or the lengths between points p1 and p4 for the first length and p1 and p2 for the second length. Thus the claimed aspect ratio or shaded region of fig. 67 is common in both images of fig. 67).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Burt et al.'s teaching of "cropping functions" in col. 2, line 32 that "limit the size of [a] mosaic" in col. 6, line 15 as shown in figures 2A-2C and fig. 7,num. 706 with Takiguchi et al.'s lengths between points p1 and p4 for the first length and p1 and p2 for the second length in order to achieve the goal of Burt et al.'s teaching to "limit the size of [a] mosaic" in col. 6, line 15 as shown in figures 2A-2C and fig. 7,num. 706.

Regarding claim 13, the combination of Burt et al. teaches the method claimed in claim 3, wherein the step of combining (Fig. 3,num. 304:COMBINATION PROCESS) source digital images (Fig. 2A shows a plurality of partially overlapping images for combining.) further comprises the steps of:

i)   warping the source digital images to compensate for distortion due to perspective projection, yielding warped digital images (Burt et al. states, " The aligning process [shown in figure 3,num. 300:ALIGNMENT PROCESS] is accomplished by warping the images to one another (col. 5, lines 63,64).");

ii)   aligning the warped digital images to identify overlapping regions (Figure 2A shows a group equally spaced images that are aligned using the aligning process shown in figure 3,num. 300:ALIGNMENT PROCESS with overlapping portions shown by the dashed rectangles and mentioned in col. 17, lines 35-37.); and

iii)   blending (Fig. 3,num. 304:COMBINATION PROCESS receives the

aligned image outputted from fig. 3,num. 300 via numeral 302 to "seamlessly combine"

images in col. 6, lines 18-21.) the warped digital images in the overlapping regions

(Figure 2A shows a group equally spaced images that are aligned using the aligning

process shown in figure 3,num. 300:ALIGNMENT PROCESS with overlapping portions

shown by the dashed rectangles and mentioned in col. 17, lines 35-37.) to form a

composite digital image (Output of figure 3,num. 304 is a composite digital image.).

Regarding claim 14, the combination of Burt et al. teaches the method claimed in

claim 13, wherein the step of blending warped digital images (Fig. 3,num.

304:COMBINATION PROCESS receives the aligned image outputted from fig. 3,num.

300 via numeral 302 to "seamlessly combine" images in col. 6, lines 18-21.) includes

(Fig. 3, num. 304: COMBINATION PROCESS receives weight from fig. 3, num.

302:SELECTION PROCESS) calculating a weighted average of the pixel values (fig.

3,num. 302: SELCTION PROCESS calculates a weight shown in detail in figure 5,num.

511: WEIGHTING for the aligned image which contains overlap.) in the overlapping

region (Weights are applied to an image with overlap regions shown in figure 2A.).

Regarding claim 16, the combination of Burt et al. teaches the method claimed in claim 3, wherein the step of combining (Fig. 3,num. 304:COMBINATION PROCESS) source digital images (Fig. 2A shows a plurality of partially overlapping images for combining.) further comprises warping (Fig. 3, num. 304:COMBINATION PROCESS receives ALIGNMENT INFORMATION which warps images together.) a composite digital image (Fig. 3, Label: INPUT IMAGE) to simulate projection onto a geometrical surface (Fig. 7,num. 706 is a flat surface for displaying an image.) suitable for viewing.

Regarding, claim 27, the combination of Burt et al. teaches a computer program product stored on a computer readable medium for performing the method of claim 1 in figure 8, num. 812:STORAGE.

9.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et al. (US Patent 5,649,032 A) in view of Armstrong et al. (US Patent 6,580,457 B1).

Regarding claim 5, Burt et al. discloses a method for producing a cropped digital image, comprising the steps of:

a)   providing (Fig. 3, label "INPUT IMAGE".) a plurality of partially overlapping source digital images (Fig. 2A shows a plurality of partially overlapping images which are used to generate a mosaic image.);

b)   providing a cropping aspect ratio L:H (Fig. ,num. 302 provides a "cropping...size" in col. 6, line 15), the cropping aspect ratio being the ratio of the length to the height of the cropped digital image;

     c)   providing a cropping criterion ("parameters" in col. 11, line 3 are used as

criteria for "cropping functions" in col. 2, line 32 or a "cropping function" in col.11, line

3.), the cropping criterion being a criterion for the size and location of the cropped digital

image (or "region of interest" in col. 11, line 3 inherently has a size and location.);

     d)   combining (Fig. 3,num. 304:COMBINATION PROCESS) the

source digital images (Fig. 2A shows a plurality of partially overlapping images for

combining.) to form a composite digital image (Fig. 2A shows a plurality of partially

overlapping images which are used to generate a mosaic image.);

     e)   automatically selecting (Fig. 3,num. 302: SELECTION PROCESS is a

means for an "automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55.

Where the "selection functions may include cropping" in col. 10, line 53. Thus, fig.

3,num. 302 automatically selects cropping as indicated in fig. 5,num. 504: CROPPING.)

the cropping region (Fig. 3,num. 302: SELECTION PROCESS is a means for an

"automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55 that corresponds

to a cropping function that crops a region or "[image] portion[ ]" in col. 2, line 33.) of the

composite digital image (Fig. 3,num. 302: SELECTION PROCESS is a means for an

"automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55 that corresponds

to a cropping function that crops a region or "[image] portion[ ]" in col. 2, line 33 of the

composite digital image or mosaic image of figure 2A.) according to

e1)   the cropping criterion (Fig. 3,num. 302: SELECTION PROCESS is a

means for an "automatic[ ]" in col. 10, line 56 "selection function[ ]" in col. 10, line 55 that

corresponds to a cropping function which crops a region or "[image] portion[ ]" in col. 2,

line 33 of the composite digital image or mosaic image of figure 2A according to the

cropping criterion of fig. 5, step 502:SELECT SELECTION FUNCTION AND

PARAMETERS which uses "parameters to control the cropping function" in col. 11, lines

2-4.),

                e11)   said cropping region (or "[image] portion[ ]" in col. 2, line 33.) being

                        e111) a rectangular region (or a shape as mentioned in fig. 5,num.

506. Note that the shape of fig. 5,num. 506 corresponds to "cropping functions" in col. 2,

line 32 and "cropping function" in col. 11, line 3 and image portion of col. 2, line 33 since

an image portion does have a shape.) having said aspect ratio L:H ("cropping...size" in

col. 6, line 15.), and

                        e112) having size ("cropping...size" in col. 6, line 15.) and location

("select[ed]...portion" in col. 2, lines 32,33 includes "cropping functions" in col. 2, line 32

that corresponds to a region of interest of fig. 5,num. 506.) determined by the cropping

criterion ("parameters to control the cropping function" in col. 11, lines 2-4.); and

        f)   cropping (Fig. 5, step 518:APPLY SELECTION FUNCTION

crops the image based on step 506 of fig. 5.) the composite digital image (mosaic image

of figure 2A.) to the cropping region to form a cropped digital image (at the output of

step 518: APPLY SELECTION FUNCTION.);

Burt et al. does not teach the remaining limitation of claim 5, but does suggest

that a user can select a size or "select a region of interest" in col. 11, line 4. Thus, a

user can select any size from small to large.

However, Armstrong et al., in the field of endeavor of electronic photography,

teaches a cropping criterion (Fig. 9,num. 81:# VERTICAL LINES=TOTAL VERTICAL

LINES IN IMAGER) that specifies that a cropped digital image (Figure 5a contains a

smaller rectangle labeled: MODE 1 640 X 480 IMGAE) is the composite digital image

region (The smaller rectangle labeled: MODE 1 640 X 480 IMAGE.) that is largest in

area (The smaller rectangle contains the largest area of the image of fig. 5a.) of the set

of all composite digital image regions (Fig 5a has regions of a top, bottom, left, and right

regions which are labeled as "CROPPED".) having aspect ratio L:H (In reference to the

bottom cropped margin; 640 for the length and 18 lines high.)

It would have been obvious at the time the invention was made to one of ordinary

skill in the art to modify Burt et al.'s teaching of selecting a size for dropping with

Armstrong et al.'s teaching of selecting a larger size for cropping because "The images

remain of good quality with a faster overall frame rate [for all modes 1-3 in col. 5, lines

6-9] (Armstrong et al., col. 5, lines 27-29)." Note that mode 1 corresponds to the image

of figure 5a.

10.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et

al. (US Patent 5,649,032 A) in view of Takiguchi et al. (US Patent 6,549,681 B1).and

further in view of Seitz et al. (View Mophing, Proceedings of the 23rd annual conference

on Computer graphics and interactive techniques, ACM Press, 1996, pp. 21-30).

        Regarding claim 15, the combination of Burt et al. does not teach the limitation of

claim 15, but does suggests other forms of blending shown in figure 6,num.

614:OTHER.

        However, Seitz et al. teaches a method, wherein a step of blending warped

digital images (fig. 4 has images I_o with "^" on top of I_o and I_1 with a "^" on top of I_1 are

warp images that corresponds to step 1 or prewarping on page 24, right column.) further

comprises the steps of:

        i)   projecting (A projective transform "H" is applied to the images I_o with "^" on

top of I_o and I_1 with a "^" on top of I_1 in the above step 1.) the warped digital images (fig.

4 has images I_o with "^" on top of I_o and I_1 with a "^" on top of I_1 are warped images that

corresponds to step 1 or prewarping on page 24, right column.) to simulate image

capture on parallel image planes (Fig 4 shows the images I_o with "^" on top of I_o and I_1

with a "^" on top of I_1 in a parallel plane.), forming projected digital images (The images

I_o with "^" on top of I_o and I_1 with a "^" on top of I_1 are pre-warped and projected digital

images);

  ii) morphing (Step 2:Morph on page 24, right column) the projected digital

images (The images I_o with "^" on top of I_o and I_1 with a "^" on top of I_1 are pre-warped

and projected digital images) in the overlapping regions (Morphing of step 2 uses

"corresponding points" between both of the above images.) to form a projected

composite digital image (Figure 4, image I_s with a "^" on top of the I_s is generated from

the above two images.)

  iii) choosing viewing parameters (Page 26, section 4.1:Controlling the Morph

using "H_s" allows interaction of the morphing.) for a composite digital image (fig. 4,

image I_s); and

  iv) re-projecting (Step 3:Postwarp on page 24, right column uses a projective

transform, "H".) the projected composite digital image (Figure 4, image I_s with a "^" on

top of the I_s is generated from the above two images.) to simulate image capture with

the chosen viewing parameters (Page 26, section 4.1:Controlling the Morph [step 2 on

page 24,right column] using "H_s" allows interaction of the morphing.), forming a

composite digital image (fig. 4, image I_s).

  It would have been obvious at the time the invention was made to one of ordinary

skill in the art to modify the combination of Burt et al.'s teaching of another blending

technique shown in figure 6, num. 614:OTHER with Seitz et al.'s teaching of blending or

"view morphing enables transitions between images of different objects that give a

strong sense of metamorphosis in 3D (Seitz et al., page 27, section: CONCLUSIONS)."

11.   Claims 17,18, 22, 23 and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Burt et al. (US Patent 5,649,032 A) in view of Takiguchi et al. (US

Patent 6,549,681 B1) further in view of Yoshida et al. (US Patent 6,266,128 B1).

Regarding claim 17, the combination of Burt et al. does not teach the limitation of

claim 17, but does suggest that a user can select a size and shape of an image as

shown in figure 5,num. 506: SELECT REGION OF INTEREST SIZE AND SHAPE.

However, Yoshida et al., in the field of endeavor of printing images from a

camera, teaches claim 17 of a method, wherein an aspect ratio is a portrait aspect ratio

and landscape ratio in col. 7, lines 47-56.

Claim 18 was addressed in claim 17.

It would have been obvious at the time the invention was made to one of ordinary

skill in the art to modify Burt et al.'s suggestion of a user selectable size and shape with

Yoshida's teaching in col. 7, lines 47-56, because Yoshida's teaching "has a good or

fine appearance, without making a useless or wasteful space on the printing paper

(Yoshida, col. 8, lines 3-7)."

Regarding claim 22, the combination of Yoshida teaches the method claimed in

claim 1, wherein the aspect ratio is 2:3 and 9:16 and 1:3 in col. 7, lines 42-47.

Claims 23 and 24 were addressed in claim 22.

12.   Claims 19, 20, 21 and 25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Burt et al. (US Patent 5,649,032 A) in view of Takiguchi et al. (US

Patent 6,549,681 B1) further in view of Suzuki et al. (US Patent 6,094,218 A).

Regarding claim 19, the combination of Burt et al. does not teach the limitation of claim 19, but does suggest that a user can select a size and shape of an image as shown in figure 5,num. 506: SELECT REGION OF INTEREST SIZE AND SHAPE.

However, Suzuki et al., in the field of endeavor of displaying and trimming images, teaches the limitation of claim 19, wherein the aspect ratio is 3:2 and 16:9 and 3: 1 in col. 6, lines 36-39.

Claims 20 and 21 were addressed in claim 19.

Regarding claim 25, Suzuki et al. teaches a method, wherein an aspect ratio ("aspect ratio" in col. 9, line 48) is included as meta-data ("magnetic information" in col. 9, line 49) with at least one source digital image ("frame image obtained from the scanner (col. 9, line 51)...").

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Burt et al.'s teaching of a user selectable size and shape with Suzuki et al.'s teaching of an aspect ratio as meta data, because "a user can easily and simply perform an operation to obtain the desired image...and...can save the results (Suzuki et al., col. 4, lines 46-50)."

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Komiya et al. (US Patent 6,744,931 B2) is pertinent as teaching a method of cropping a plurality of overlapping images as shown in figures 46A,46B,48A,48B.

Irani et al. (US Patent Application Publication US 2004/0071367 A1) is pertinent as teaching a method of cropping a plurality of overlapping images as shown in figure 3D.

14.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 6-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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